

Basic Information for Handling Hazardous Wastes



Provided by the
Utah Department of Environmental Quality
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Defining Hazardous Waste

A waste is any solid, liquid or contained gaseous material that is discarded by being disposed of, burned or incinerated, or recycled. There are some exceptions for recycled materials. It can be the by-product of a manufacturing process or simply a commercial product that you use in your business, such as a cleaning fluid or battery acid, that is being disposed of. Even materials that are recyclable or can be reused in some way, such as burning used oil for fuel, may be considered waste. Hazardous waste can be one of two types:

Listed Hazardous Wastes. Your waste is considered hazardous if it appears on one of four lists published in the Code of Federal Regulations (40 CFR Part 261). Currently, more than 400 wastes are listed. Wastes are listed as hazardous because they are known to be harmful to human health and the environment when not managed properly.

Characteristic Hazardous Wastes. If your waste does not appear on one of the hazardous waste lists, it still might be considered hazardous if it demonstrates one or more of the following characteristics:

- It catches fire under certain conditions. This is known as an ignitable waste. Ignitable wastes have a flash point of less than 140 ° F. Examples are paints and certain degreasers and solvents.
- It corrodes metals or has a low pH (less than or equal to 2) or a high pH (greater than or equal to 12.5). This is known as a **corrosive** waste. Examples are rust removers, acid or alkaline cleaning fluids and battery acids.
- It is unstable and explodes or produces toxic fumes, gases and vapors when mixed with water or under other conditions such as heat or pressure. This is known as a **reactive** waste. Examples are certain cyanides or sulfide-bearing wastes.
- It is harmful or fatal when ingested or absorbed, or it leaches toxic chemicals into the soil or ground water when disposed of on land. This known as a **toxic** waste. Examples are wastes that contain high concentrations of heavy metals such as cadmium, lead or mercury.

You can determine if your waste is toxic by having it tested using the Toxicity Characteristic Leaching Procedure (TCLP), or by simply knowing that your waste is hazardous or that your processes generate hazardous waste.

Summary of Inspection Items

Manifest File

- When the waste disposal company or transporter picks up the waste they will leave the **generator copy** of the manifest, signed by the generator and the transporter of the waste.
- A **Land Disposal Restriction Certification (LDR)** must be attached to each completed manifest. The LDR may be supplied by the transporter
- When the waste arrives at the disposal facility, the **original manifest** is signed and mailed back to the generator. **Staple items 1, 2 and 3 together** to complete the manifest file. Use the **Manifest Management Log**.
- Waste totals determine monthly generation rate, see G.
- Keep completed manifest file at the facility where the waste was generated, for a minimum of three years.

Generation and Storage of Waste Streams

Containers of hazardous waste must be:

- **Closed**, meaning no open bungholes, loose bungs rings or funnels in the bungholes. Threaded funnels with closed ball valve can be used. A funnel can be screwed into a ball valve and the ball valve screwed on to a two-inch nipple into the bunghole. The ball valve must be closed to meet closed requirements. If a barrel or container tips over, its contents must stay inside. An unsecured lid lying on a barrel without the bung ring tightened is considered an open container.
- **Dated** with the date the first hazardous waste went into the container.
- **Labeled** with the words **HAZARDOUS WASTE**.
- Good containers have no rust, dents, bulges, leaks, holes, etc.
- Use the **Container Management Log** for weekly inspection of containers.

Emergency Equipment

Spill control equipment such as rags, floor dry, kitty litter, sawdust, pads, berms, and any other material or equipment needed to manage or prevent a spill at your facility.

Emergency Information

This information must be posted by phones and must include at a minimum:

- The number to call in the event of an emergency, i.e. 911 or 9-911.
- The name of the emergency coordinator and alternate and how they can be contacted i.e., home phone, cell phone, pager, radio, etc.
- The location of the fire extinguishers at the facility, e.g. map or description.
- The location of the spill control equipment, e.g. map or description.

Letters to Emergency Responders

Letters, to the nearest Police Department, Fire Department and Hospital and/or emergency clinic that would respond to an emergency at the facility, must be sent informing them of the nature of the facility's business practices. The letter also needs to inform them of the waste streams generated at the facility. The sample letter in the inspection checklist and information from hazardous waste manifests may be used to draft these letters. Keep a copy of the letters on file at the facility.

Employee Training

Keep records documenting that employees have received training in proper waste handling procedures as well as the risks involved with handling their wastes.

Generator Status

- Conditionally Exempt Small Quantity Generator (CESQG) generates less than 220 pounds per month. These generators can never have more than 2200 pounds on site. Depending on the type of waste, this equals 4 to 5 55-gallon drums. Exceeding 2,200 pounds of stored hazardous waste elevates a generator to a Small Quantity Generator status with additional regulatory requirements.
- Small Quantity Generators (SQG) generate between 220 and 2,200 pounds per month. They can store up to 13,200 pounds hazardous waste (approximately thirty 55-gallon drums) no longer than 180 days or 270 days if shipments must be transported greater than 200 miles. Small Quantity Generators must have an EPA Identification Number.
- Large Quantity Generators (LQG) generates more than 2,200 pounds per month and can store wastes no longer than 90 days at the facility. LQGs have the highest degree of regulation.

Universal Wastes

Universal wastes include Batteries, Pesticides, Thermostats, and Mercury-containing lamps (Fluorescent Tubes). Universal wastes must be individually labeled or stored in containers labeled: Universal Waste Batteries, Universal Waste Pesticides, Universal Waste Mercury Thermostat, or Universal Waste Lamps, Waste Lamps or Used Lamps. The containers must be dated when the first universal waste is placed into the containers. Universal wastes may be stored no longer than one year from the date of generation. **Universal Wastes** do not count towards monthly hazardous waste totals if they are recycled.

Batteries

Nickel-cadmium (Ni-Cd) and small sealed lead-acid batteries, which are found in many common items including electronic equipment, mobile telephones, portable computers and emergency backup lighting are considered universal wastes when recycled. Batteries should be kept intact and closed.

Pesticides

Agricultural pesticides that have been recalled or banned from use, are obsolete, have become damaged, or are no longer needed are universal wastes.

Thermostats

Thermostats which can contain as much as 3 grams of liquid mercury and are located in almost any building, including commercial, industrial, agricultural, community, and household buildings are universal wastes.

Fluorescent Tubes

Fluorescent tubes contain the toxic heavy metal mercury. If tubes are broken they must be managed as a hazardous waste; otherwise they are considered a Universal Waste if they are recycled. Facilities are encouraged to use low mercury tubes currently being manufactured by Phillips, GE and Sylvania. Currently, there are three manufactures of low mercury content lamps, Phillips Lighting "ALTO" lamps, General Electric (GE) Lighting "ECOLUX" lamps and Osram Sylvania "ECOLOGIC". The manufacturer's lamps are easily identified as being environmentally friendly and can be disposed of by normal trash disposal methods. Contact suppliers for more information.

Recycling Information

Hazardous wastes may be recycled at the Salt Lake County Household Hazardous Waste Collection Station at the Salt Lake County Landfill, 6030 West California Ave, (1330 South). They will recycle the tubes for 25 cents per foot. This facility can handle small quantities of many hazardous wastes generated by Conditionally Exempt Small Quantity Generators for

a nominal charge. For more information about this facility, contact Dorothy Adams at 313-6713 or Doug Sims at 541-4078.

Additional recycling information is available by contacting:

EOG Environmental, (801) 234-1156, contact person: Bryan Roper
(866) 271-0961.

Veolia Environmental Services (VES), Phone: (801) 294-7111, Contact Name: Rob Yarosik, Fax: (801) 294-7333

Veolia Environmental Services (VES), USA, Phone: (303) 289-4827,
Fax: (303) 289-3520

Earth Protection Services, Phoenix, AZ (800) 414 -0443

Waste Reduction

The easiest and most cost-effective way of managing any waste is not to generate it in the first place. You can decrease the amount of hazardous waste your business produces by developing a few "good housekeeping" habits. Good housekeeping procedures generally save businesses money and they prevent accidents and waste. To help reduce the amount of waste you generate, try the following practices at your business:

Do not mix wastes. Do not mix nonhazardous waste with hazardous waste. Once you mix nonhazardous waste with hazardous waste you may increase the amount of hazardous waste created, as the whole batch may become hazardous. Mixing waste can also make recycling very difficult, if not impossible. A typical example of mixing wastes would be putting nonhazardous cleaning agents in a container of used hazardous solvents.

Recycle and reuse manufacturing materials. Many companies routinely put useful components back into productive use rather than disposing of them. Items such as oil, solvents, acids and metals are commonly recycled and used again. In addition, some companies have taken waste minimization actions such as using fewer solvents to do the same job, using solvents that are less toxic, or switching to a detergent solution.

Change materials, processes, or both. Businesses can save money and increase efficiency by replacing a material or a process with another that produces less waste. For example, you could use plastic blast media for paint stripping of metal parts rather than conventional solvent stripping.

Safely store hazardous products and containers. You can avoid creating more hazardous waste by preventing spills or leaks. Store hazardous product and waste containers in secure areas and inspect them frequently for leaks. When leaks or spills occur, materials used to clean them up also become hazardous waste.

Facilities are encouraged to eliminate hazardous waste generation, if possible, e.g., soap and/or hot water instead of solvents, or latex paint instead of oil based paint. If elimination of hazardous waste is not possible, find ways to lower the amount and/or the toxicity of the waste. If a facility uses hazardous products, use up the entire product. Buy only what is needed for the job. Recycle hazardous wastes if possible. Disposal of hazardous waste carries a lifetime of liability. **Facilities are responsible for that waste forever.**

Managing Used Oil

What is used oil?

- Synthetic oil – usually derived from coal, shale, or polymer-based starting material.
- Engine oil – typically includes gasoline and diesel engine crankcase oils and piston-engine oil for automobiles, trucks, boats, airplanes, locomotives and heavy equipment.
- Transmission fluid
- Refrigeration oil
- Compressor oils
- Metalworking fluids and oils
- Laminating oils.
- Industrial hydraulic fluid
- Copper and aluminum wire drawing solution
- Electrical insulating oil.
- Industrial process oils.

- Oil used as buoyants.

Used oil is not one of these things

- Waste oil that is bottom clean-out waste from virgin fuel storage tanks, virgin oil spill cleanups, or other oil wastes that have not actually been used.
- Products such as antifreeze and kerosene.
- Vegetable and animal oil, even when used as a lubricant.
- Petroleum distillates used as solvents.

Oil Leaks or Spills

- Take steps to prevent leaks and spills. Keep machinery, equipment containers and tanks in good working condition and be careful when transferring used oil. Have sorbent materials available on site.
- If a spill or leak occurs, stop the oil from flowing at the source. If a leak from a container or tank can't be stopped, put the oil in another holding container or tank.
- Contain spilled oil. For example, containment can be accomplished by erecting sorbent berms or by spreading a sorbent over the oil and surrounding area.
- Clean up the oil and recycle the used oil, as you would have before it was spilled. If recycling is not possible, you first must make sure the used oil is not a hazardous waste and dispose of it appropriately. All used cleanup materials, from rags to sorbent booms, that contain free-flowing used oil also must be handled according to the used oil management standards. All leaked and spilled oil must be handled as used oil. If you are a used oil handler, you should become familiar with these cleanup methods. They may also be part of a spill response action plan.
- Remove, repair, or replace the defective tank or container immediately.
- If you have used oil on rags or other sorbent materials from cleaning up a leak or spill, you should remove as much of the free-flowing oil as possible and manage the oil, as you would have before it spilled.
- Once the free-flowing used oil has been removed from these materials, they are not considered used oil and may be managed as solid waste as long as they do not exhibit a hazardous waste characteristic. The materials from which used oil

has been removed continue to be regulated as used oil if they are to be burned for energy recovery (regardless of the degree of oil removal).

Summary of Used Oil Rules

- The Utah Legislature passed the Used Oil Management Act in 1993. Senate Bill 12 called for the collection, processing, recycling and reusing used oil and prohibited the disposal of used oil in landfills or anywhere in the environment. The rules are found in R315-15, UAC.
- All used oil containers must be in good condition and labeled with the words "Used Oil."
- There are close to 400 collection centers throughout Utah. Most are private businesses that have volunteered to collect used oil, free of charge, from the public. These collection centers can only accept used oil from "Do-it-yourself" individuals and from small farmers, **not** from businesses. Collection centers include Jiffy Lube, Checker Auto, Autozone, Pep Boys and one Utah Department of Transportation shop located at Thompson Springs. To find the used oil collection center nearest you, call toll free (800) 458-0145.
- A list of used oil transporters is found on the opposite side. These businesses are permitted by the State of Utah to transport used oil in quantities exceeding 55 gallons.
- Oil filters should be punctured, crushed or dismantled and hot drained for at least 12 hours so that no free oil remains in the filter when it is discarded or recycled.
- Used oil must be managed in such a way as to keep it from getting onto the ground or into surface or ground water. Spills must be cleaned up immediately. Spills exceeding 25 gallons must be reported to the Department of Environmental Quality at (801) 536-4123.
- Unless you are a used oil collection center you can only burn your **own** oil in space heaters.
- Never mix used oil with other substances, especially hazardous wastes such as solvents or thinners.
- If a business desires to become a used oil collection center, please contact the Utah Division of Solid and Hazardous Waste at (801) 538-6170.

Used Oil Transporters

Emerald Services Inc.
2450 South 800 West
Salt Lake City, Utah 84119
(801) 973-4131

Safety-Kleen Corp.
1066 South Pioneer Road
Salt Lake City, Utah 84104
(801) 975-0742

Thermo Fluids Inc.
3545 West 500 South
Salt Lake City, Utah 84104
(801) 296-6611

Golden Eagle Oil Refinery Inc.
1474 West 1500 South
Woods Cross, Utah 84087
(801) 298-9818

Oil Rerefining Co.
977 South 700 West
Salt Lake City, Utah 84104
(801) 977-0827

For Southwestern Utah

Ev-Con Recycling
4560 East Hammer Lane
North Las Vegas, NV 89030
(702) 644-1167

For Northern Utah

Tri-State Oil Recycling Services
5276 Highway 16
Newcastle, WY 82701
(307) 746-3688
(800) 876-8645

Used Tires

- Facilities are encouraged to call a waste tire transporter and arrange for a pickup or collection trailer.
- Utah Statute bans the disposal of waste tires in landfills except for tires received four or less at a time or tires with a rim diameter over 24.5 inches.
- Landfill operators generally segregate tires from loads and contract with tire transporters to collect them for recycling. Some landfills also accept loads of waste tires that are also transported to a recycler. Landfill charges for accepting waste tires generally reflect the cost of transportation to a recycler.
- No more than 1000 waste tires are allowed on a facilities premise.
- DEQ Used Tire Contact: Wade Hansen at 538-6170.

Utah Registered Tire Recyclers

Tire Disposal and Recycling
985 South 800 West
Salt Lake City, Utah 84104
(801) 977-9010

Holnam Incorporated
6055 East Croyden Road
Morgan, Utah 84050
(801) 292-2184

Chemical Lime Company
9601 North 11490 West
Grantsville, Utah 84029
(801) 531-8153

Utah Tire Recyclers
1398 North Beck
Salt Lake City, Utah 84116
(801) 364-7900

Salt Lake Valley Solid Waste
Management Facility
6030 West 1300 South
Salt Lake City, Utah 84104
(801) 974-6920

Utah Registered Tire Transporters

Chemical Lime Company
P.O. Box 537
Grantsville, Utah 84029
(435) 884-3972

TTT Incorporated
985 South 800 West
Salt Lake City, Utah 84104
(801) 977-9010

Utah Tire Recyclers
1398 North Beck
Salt Lake City, Utah 84116
(801) 364-7900

K & K Sanitation
P.O. Box 746
Roosevelt, Utah 84066
(435) 722-1244

West Valley Tire, Inc.
P.O. Box 26306
Salt Lake City, Utah 84126
(801) 974-5030

Intermountain Tire Recyclers, LLC
3020 West 500 South
Salt Lake City, Utah 84104
(801) 886-1003

Diamond K. Waste, Inc.
P.O. Box 285
Heber City, Utah 84032
(435) 654-2321

Electronic Waste Management

Many electronic devices contain individual components made with hazardous constituents, primarily heavy metals. Cathode ray tubes (CRTs) found in color televisions and color computer monitors contain significant amounts of lead. Printed circuit boards found in computers and other electronic devices may contain lead, chromium, and silver. Some older computers contain mercury switches and many kinds of electronic devices contain nickel-cadmium, lithium, or sealed lead acid batteries. Used electronics are defined in state and federal regulations as a hazardous waste if: 1) the used electronic equipment is no longer useable and has been determined to be a waste; and 2) the material exhibits the characteristic of toxicity; and 3) the used electronic equipment originated from non-residential sources such as business, academic institutions, or governmental agencies.

Only electronic wastes determined to be hazardous waste are subject to hazardous waste regulations. Electronic wastes that are hazardous may be sent to a legitimate recycler or disposed of at a permitted hazardous waste management facility. Hazardous electronic wastes from Conditionally Exempt Generators may also be recycled or managed at a landfill permitted to accept municipal solid waste. Landfills may impose their own restrictions to regulate incoming wastes in accordance with local rules or company guidelines.

Non-hazardous electronic waste may be recycled or disposed of at a landfill permitted to accept municipal solid waste.

Businesses, institutions or agencies that send their color monitors, color televisions, or other electronic devices for disposal are considered to be the generator of the waste and must follow regulatory requirements regarding proper waste characterization, management and disposal.

Used electronic equipment and components removed from electronic equipment are regulated as hazardous wastes if the material exhibits the characteristic of toxicity. This characterization is determined by using the Toxicity Characteristic Leaching Procedure (TCLP) test. If the extract from a representative sample of the waste contains one or more of the eight toxicity characteristic metals at a concentration greater than or equal to the regulatory level for that metal, the waste is hazardous. For example, wastes exhibiting the toxicity characteristic for lead has a TCLP concentration of 5.0 mg/l or greater and carries the hazardous waste code D008.

Recent data demonstrate that waste cathode ray tubes (CRTs) from color monitors and color televisions consistently exceed the regulatory limit for lead when tested using the TCLP. Due to their weight and size, CRTs comprise a significant portion of the overall monitor or television and causes the entire unit to be hazardous waste. A generator is required to determine whether his color monitors and color televisions that are sent for

disposal are hazardous waste. The generator may make this determination by testing his equipment and demonstrating that it is not hazardous or by providing other information, such as supporting data from the manufacturer showing that the waste is not hazardous. Electronic components removed from electronic equipment and determined to be hazardous waste must be managed in compliance with Utah Hazardous Waste Management Rules R315.

If you have questions regarding this matter, please contact Ed Deputy at (801) 538-6793.

Electronics Recyclers

GRX (Guaranteed Recycling Xperts)
Eric Anderson
Regional Manager
Toll free: 1-866-479-4920
Cell: 801-386-2533
Fax: 720-377-0496
email: Erica@grxrecycles.com
website: <http://www.grxrecycles.com/>

SFI Computers Inc.
75 East 200 North
PO Box 115
Spring City, UT 84662
Phone: 435-462-1965
Fax: 435-462-3007
Email: ecycling@sficomputers.com
website: www.sfie-waste.com

Stone Castle Recycling
2675 Wadman Drive
Ogden, UT 84401
Phone: 801-731-9444
or 801-309-7380
email:
tony@stonecastlerecycling.com
website:
www.stonecastlerecycling.com

Lucency Corp.
1532 South Industrial Road (1900 West)
Salt Lake City, Utah
Phone: 801-364-4733

Endorsement Disclaimer:

Reference to any specific commercial products, processes, or services, or to any trade, firm, or corporation is for the information and convenience of the public, and does not constitute endorsement, recommendation, or favoring by the State of Utah, or its officers, employees or agents. Any list of organizations providing services that may be of interest to the public is not intended to be a complete list and is not regularly updated.

Website information

Website information for Hazardous Waste Generators –

- DEQ web site –
<http://www.deq.utah.gov/>
- Division of Solid and Hazardous Waste, Hazardous Waste Management Section –
<http://www.hazardouswaste.utah.gov/HWBranch/HWMSection/HazardousWasteManagementSection.htm>
- Managing Your Hazardous Waste: A Guide for Small Businesses –
<http://www.epa.gov/epaoswer/hazwaste/sqg/sqghand.htm>
- Resources for Small Quantity Generators –
http://www.epa.gov/epaoswer/osw/gen_trans/sqg_resources.htm
- Hazardous Waste Generator Regulations, A User-Friendly Reference Document –
http://www.epa.gov/epaoswer/osw/gen_trans/tool.pdf
- Resources for Conditionally Exempt Small Quantity Generators –
http://www.epa.gov/epaoswer/osw/gen_trans/cesqg_resources.htm
- Notification of Regulated Waste Activity (EPA Form 8700-12) and RCRA Hazardous Waste Part A Permit Application (EPA Form 8700-23) –
<http://www.epa.gov/epaoswer/hazwaste/data/form8700/forms.htm>